

REMARKS

This Amendment is in response to the Final Office Action mailed July 3, 2007. Claims 21 and 51 have been amended. No claims have been added or cancelled. Thus, claims 21-42, 44-61, and 63-70 remain pending. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Rejection Under 35 U.S.C. § 102

The Examiner rejects claims 21-42, 46-48, 51-61 and 67-70 under 35 U.S.C. § 102(e) as being anticipated by Zintel (U.S. Patent No. 6,725,281). Applicants respectfully disagree.

Zintel describes a universal plug and play (UPNP) architecture where a user interface on board a client device may control host devices, such as VCRs, cameras, printers, etc. (Zintel, column 7, lines 44-52; column 48, lines 58-61). The client devices, or user control points, include a rehydrator that obtains a description of the protocols which are utilized by a controlled device to activate functions of the controlled device (Zintel, column 19, line 59 to column 20, line 51; Figure 7). When an event occurs at a device, software on that device updates a state table of the device and creates a notification indicating the update. This update is then propagated to the rest of the plug and play devices so that those devices may update their own state tables (Zintel, column 28, lines 64-67).

Claim 21, as amended, recites in part:

a module for generating at least one high-level event message indicating that an event has occurred that is relevant to the media capture device;
a router on-board the media capture device for determining whether said at least one high-level event message is handled locally at the media capture device or remotely at the second device;
a mapper on-board the media capture device for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device, the at least one lower-level message includes implementation specific information for the one or more hardware elements based on the second device and the event;

Applicants respectfully submit that Zintel fails to teach each and every feature as claimed in claim 21.

Zintel describes that a controlled device may respond to discovery requests of devices that are new to an existing universal UPNP network, accept controls from a user control point, and send events to user control points (Zintel, column 6, lines 48-52). Each controlled device includes a server in order to responds to the requests of user control points (Zintel, column 10, lines 41-52). Furthermore controlled devices broadcast event messages to update all subscribing UPNP devices that an update has occurred on the controlled device (Zintel, column 28, lines 30-37).

In the passages cited above and relied upon by the Examiner, Zintel describes that a controlled device may either respond directly to user control point requests, or broadcast device status for a controlled device. Furthermore, Zintel describes that all user control points include a rehydrator, which acts as an adaptor for translating messages received from a receiving controlled device, or which creates messages formatted so that a controlled device may understand it (Zintel, column 20, lines 31-65). The rehydrator is described and illustrated as existing within user control points (*See* Figures 7-10), and not

controlled devices. Thus, any events, commands, or activities which are generated by, or the result of a response by, controlled devices, are handled at user control points and not at the controlled devices.

Further, prior to a controlled device being subject to commands of a user control point, the controlled device must supply the user control point with a Service Control Protocol Definition embedded in a Description Document (Zintel, column 20, lines 17-30). The Description Document is provided to each user control point to allow the user control point to handle incoming messages from specific controlled devices, as well as to format commands for specific controlled devices.

Applicants, however, claim “a mapper on-board the media capture device for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device ...” Zintel describes the exact opposite, as Zintel requires that user control points utilize the Description Document to perform message translation and handling at the user control point and not the controlled device. Only after the user control point, via the rehydrator and the Description Document, translates a message from a controlled device, are hardware or user interface elements impacted at the controlled device. The controlled devices merely provide the Description Document and notices that conform to the Document to control points, for the future use by the control points. Therefore, Zintel fails to teach any translation or mapping of commands at a controlled device, and thus fails to teach “a mapper on-board the media capture device for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the second device ...” as claimed.

Zintel further states with reference to the Description Document that:

In UPnP, this data description takes the form of the Description Document 226, which contains a Contract 412. The Contract defines network data packets 413 (e.g., XML data), request/response patterns, and protocol (e.g., GENA, HTTP, SSDP) via which the packets are exchanged. This information is sufficient for the Rehydrator to exchange the appropriate network data packets to interact with the Controlled Device Service, including to invoke commands, query and set properties, and receive and respond to events, without download of any executable code to the User Control Point 104 device and with a zero installation or configuration experience.

...

Accordingly, the Rehydrator operates as a universal proxy object with data-driven conversion of programmatic interfaces to network data messages. Further, the Rehydrator produces the programmatic interface at the User Control Point based solely on an XML data description. This operation allows the Rehydrator to produce just-in-time transient interfaces to remote device Services without the complexity of code downloads and installation or configuration. Upon a later release of the interface by the application, the Rehydrator destroys the interface without need to de-install or clean up persistent configuration data in a registry or configuration file of the operating system or object execution run-time

(Zintel, column 20, line 40 to 21, line 19 [Emphasis Added])

Thus, as recited in Zintel, the conversion of notifications that control and activate hardware elements at user control points is performed at the user control point. Further, the messages comply with the original controlled device messages format and communications protocol that are defined in the Description Document. Only when the original messages are processed at the rehydrator, are the appropriate device-specific functions and interface elements activated. Thus, even if Zintel were to map high to low level messages at a controlled device, the translation to, and inclusion of, device specific functions is explicitly performed at controlled devices. Thus, Zintel must also fail to teach “a mapper on-board the media capture device for mapping said at least one high-level message into at least one lower-level message ...the at least one lower-level message includes implementation

specific information for the one or more hardware elements based on the second device and the event.”

Applicants further claim “a router on-board the media capture device for determining whether said at least one high-level message is handled locally at the media capture device or remotely at the second device.” The Examiner cites Zintel at column 28, lines 64-67 as disclosing this limitation. The Examiner further states:

[A]s seen in Column 6, lines 48-64, the controlled device sends event messages to those control points, even if you want to consider these message events as being broadcasts, there are still messages being routed onto the network. With the idea that the router is not located within the controlled device, as seen in Column 6, lines 48-64 and Figure 5, elements 106, 308, and 234, that within the controlled device (106), the event server (308) creates and sends the events to the user control points (104).

(Office Action, mailed October 19, 2007, pages 11-12).

Applicants respectfully disagree with the Examiner’s interpretation of Zintel. The Event Subscription Server (308) is described as being responsible for sending updates to subscribing user control points in response to events. However, the status updates required in the UPNP architecture are automated so that subscribing devices are always provided with an updated status for controlled devices (*See* Zintel, column 17, lines 1-4 *stating* “UPNP rules require every change to an SST [for a controlled device] generate a corresponding event to announce the change to the all interest User Control Points”). Thus, when an event occurs at a controlled device, the controlled device must send update notifications to user control points because every event requires a notification be broadcast to all subscribing devices. Thus, even if such a broadcasted notification is considered message routing (Office Action, mailed October 19, 2007, page 11), there is no discretion of the controlled device to determine “whether said at least one lower-level message is

handled locally at the media capture device or remotely at the second device.” Rather, the event must be broadcasted to subscribing control points and handled remotely. Thus, Zintel must fail to teach “a router on-board the media capture device for determining whether said at least one high-level message is handled locally at the media capture device or remotely at the second device.”

Therefore, Zintel fails to describe each and every feature as claimed by the Applicants in Claim 21. Applicants respectfully submit that claim 21 is not anticipated by Zintel. Claims 22-42, 44, and 46-58 depend on claim 21, and include additional features and limitations to those contained in claim 21. Thus, for similar reasons to those discussed above with respect to claim 21, claims 22-42, 44, and 46-48 are also not anticipated by Zintel. The Applicants respectfully request withdrawal of the rejections of claim 21-42, 44, and 46-48 under § 102.

Claim 51 recites in part:

- a router in the client device to determine whether the at least one high level event message should be handled locally at the client device or remotely at the host;
- a state transition table to transition the client device to the a new state based on the at least one high level event and the client device's present state;
- a module to update the client device's current state information; and
- a mapper on the client device for mapping said at least one high-level message into at least one lower-level message for controlling one or more hardware elements controlled by the host device, the lower-level message includes implementation specific information for the second device and the event, and for triggering the activation of one or more user-perceivable interface elements of the host device.

As discussed above, with respect to claim 21, Zintel is completely silent as to making any determination of mapping or message routing on board a media capture device. Even if the system of Zintel were to make a routing determination, the determination is simply not

performed “on board” a media capture device. Furthermore, the UPNP architecture of Zintel requires that hosts/user control points perform any notification or control translation. Because claim 51 claims “a mapper on the client device for mapping said at least one high-level message into at least one lower-level message” and “a router in the client device to determine whether the at least one high level event message should be handled locally at the client device or remotely at the host,” claim 51 is not anticipated by Zintel. Furthermore, claims 52-61 and 63-65 depend on claim 51, and include additional features and limitations. Thus, claims 52-61 and 63-65 are also not anticipated by Zintel.

Claim 67 recite:

A method comprising:
determining one or more user interface elements of a media capture device that are supported by a second device and that can cause one or more user-perceivable interface elements of the second device to be activated, when the media capture device is coupled with the second device;
receiving a notification at the media capture device, indicating that an event has occurred with respect to the media capture device;
determining, at a router on-board the media capture device, whether the event should be handled locally at the media capture device or remotely at the second device;
when the event is to be handled locally, processing the event locally at the media capture device;
transmitting a message to the second device, intended to activate a hardware element on the second device;
activating a hardware element and the one or more user-perceivable interface elements on the second device, in response to the message.
(Emphasis Added)

As discussed above, with respect to claim 21 and 51, Zintel fails to making any determination of message routing on board a media capture device, and teaches the opposite as required by UPNP systems. Thus, Zintel fails to teach or suggest “determining, at a router on-board the media capture device, whether the event should be handled locally at the media capture device or remotely at the second device,” as claimed in claim 67.

Therefore, Zintel fails to anticipate claim 67. Claims 68-70 depend on claim 67, and include additional features and limitations. Thus, claims 68-70 are also not anticipated by Zintel.

Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of claims 21-42, 46-48, 51-61 and 67-70 under 35 U.S.C. § 102(e) as being anticipated by Zintel.

Rejection Under 35 U.S.C. § 103

The Examiner rejects claim 49 under 35 U.S.C. § 103(a) as being unpatentable over Zintel (U.S. Patent No. 6,725,281) in view of alleged knowledge in the art. Applicants respectfully disagree.

As discussed above with respect to claim 21, Zintel fails to describe or even suggest event mapping and message routing on board a media capture device, as claimed. The alleged knowledge in the art does not cure this defect of Zintel. Because claim 49, which depends from claim 21, and includes additional features and limitations, claim 49 is also not anticipated or rendered obvious by Zintel in view of alleged knowledge in the art, for at least the same reasons advanced above with respect to claim 21. Applicant respectfully requests that the Examiner withdraw the rejection of claim 49 under 35 U.S.C. § 103(a) as being unpatentable over Zintel (U.S. Patent No. 6,725,281).

The Examiner rejects claims 50 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Armga (U.S. Patent No. 6,390,371). Applicants respectfully disagree.

As discussed above, with respect to independent claims 21 and 51, Zintel fails to describe or suggest making any mapping and routing decisions, as claimed, on board a media capture device.

Armga describes a user interface generation scheme (Armga, Abstract). To ensure that a user interface is properly displayed, an intermediary obtains UI specifications and causes a display which is appropriate for the target device (Armga, column 3, line 36 to column 4, line 9). However, Armga's device-specific UI generation fails to describe or suggest mapping or routing messages on board a media capture device, as recited in claims 21 and 51. Therefore, Zintel and Armga, alone or in combination, fail to render claims 21 and 51, and thus dependent claims 50 and 66, obvious.

Applicant respectfully requests that the Examiner withdraw the rejection of claims 50 and 66 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Armga.

The Examiner rejects claim 45 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Cortjens (U.S. Patent No. 5,526,037). Applicants respectfully disagree.

As discussed above, with respect to independent claim 21, Zintel fails to describe or suggest making any mapping or routing decisions on board a media capture device.

Cortjens describes generating control signals at local peripheral devices, such as a mouse or joystick (Cortjens, column 5, line 59 to column 6, line 2). The peripheral device is connected to a controller so that when the controller receives a signal/command from the peripheral device, the controller performs a signal conversion before sending the signal to a local or remote system (Cortjens, column 5, lines 55-59; column 8, lines 37-39). Thus, Cortjens describes a host or server device that performs signal routing, which is separate and distinct from the peripheral device that generates control signals. In Cortjens, the

peripheral devices are a mouse, joystick, etc. and the peripheral devices are not taught as performing any routing functions. Thus, Cortjens also fails to describe or suggest mapping and routing messages on board a media capture device, as recited in claim 21. Therefore, Zintel and Cortjens, alone or in combination, fail to render claim 21, and thus dependent claims 45, obvious.

Applicant respectfully requests that the Examiner withdraw the rejection of claim 45 under 35 U.S.C. § 103(a) as being unpatentable over Zintel in view of Cortjens.

Conclusion

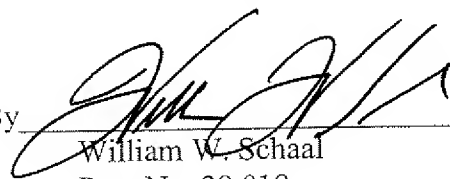
Applicant reserves all rights with respect to the applicability of the doctrine of equivalents. Applicant respectfully requests that a timely Notice of Allowance be issued in this case. If a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact William L. Jaffe at (714) 557-3800.

Respectfully submitted,

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By



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